USSR/Forestry. Forestry and Forest Cultivation.   J-3
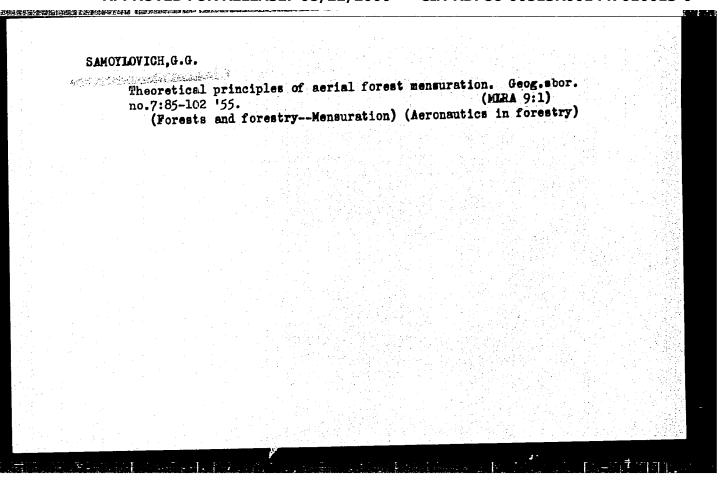
Abs Jour: Referat Zh-Biol., No 6, 1957, 22567

      with a dull, flat or sparse crown showed up poorly in aerial photo-
graphy. The experiment of measuring height of trees in pine plant-
ings 90 years old of differing thickness by aerial photography
on a scale of 1:5000 with the aid of stereoscope D-5 proved that
the measurements are exact to a practical degree. For determin-
ing the crown diameter, the most suitable instrument was the mea-
suring magnifying lens. The utilization of aerial photographs
of a scale of 1:2500 and 1:5000, combined with field investiga-
tions, acquires great value for recognition and counting of in-
dividual trees and their groups with the purpose of drawing plans
of tree locations.

Card   : 2/2   -13-

SAMOYLOVICH,G.G.

Theoretical principles of aerial forest mensuration. Geog.sbor.
no.7:85-102 '55.   (MLRA 9:1)
    (Forests and forestry--Mensuration) (Aeronautics in forestry)

SAMOYLOVICH, G.G.

USSR/Forestry - Biology and Typology of the Forest.   K-2

Abs Jour   : Ref Zhur - Biol., No 2, 1958, 5858

Author   : Samoylovich, G.G.

Inst   : Leningrad Forest Engineering Academy.

Title   : The Phenological State of the Trees of the Forest Massif
               Based on Airplane Observations.

Orig Pub   : Tekhn. inform. po rezul'tatam nauchn.-issled. rabot
               Leningrad. lesotekhn. akad., 1955, No 24, 25-29

Abstract   : In this article are given the results of the phenological
               observations which were made systematically along a pre-
               viously planned route through quarter sections of the
               Lisinskiy forest massif (Leningradskaya oblast'). They
               were made over a seven-year period beginning in 1947.
               The method of investigation is described. The following
               indices are registered: the course of foliation, the

Card 1/2

Card 2/2

USSR / Forestry. Biology and Typology.   K-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72772.

Author   : Samoylovich, G. G.
Inst   : Leningrad Forestry Academy.
Title   : Aerovisual Method of Study of the Phenological
           Condition of Plantings of a Forest.

Orig Pub: Tr. Leningr. lesotekhn. akad., 1956, vyp. 73, 171-
          183.

Abstract: Aero-visual method provides a possibility of con-
          ducting observations of the phenological condition
          of complete forests; this method provides the
          possibility: 1) of simultaneously reviewing a large
          area; 2) of judging the extent of the change of
          phenological condition, and 3) of comparing the
          condition of one plantation with another. Obser-
          vations from aircraft in combination with ground

Card 1/3
                              3

SAMOYLOVICH, G. G.

USSR/General Division. History. Classics.   A-2
                        Personalities.

Abs Jour   : Ref Zhur-Biologiya, No 20, 1957, 85043

Author   : P. V. Gorskiy, G. G. Samoylovich, P. M.
                  Podduyev, A. V. Cheremushkin, V. S. Moiseyev

Inst   :
Title   : Professor Nikolay Vasil'yevich Tret'yakov,
                  his Pedagogical, Scientific and Social
                  Activities (on his 75th Birthday)

Orig Pub   : Tr. Leningr. lesotekhn. akad., 1956, vyp.
                  73, 219-230

                  Sylviculturist. See: RZhBiol, 1956, 43148

Abstract   : No abstract.

Card 1/1

SAMOYLOVICH, G. C. , Prof. and BELOV, S. V. (Cand. Agricl. Sci. Leningrad.)

    Phenological Conditions of Woods Observed by Aerovisual Reconnaissance and
Colored Aerophotography;"

  report presented at a Phenological Conference in Leningrad, Nov 1957
  by USSR Geographical Society.

SAMOYLOVICH, G. G.

USSR / Forestry. Dendrology.   K-2

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24881.

Author : Samoylovich, G. G.
Inst   : Not given.
Title   : The Importance of the Study of the Topology of
          Plantings for Forestry, Deciphering of Aerial
          Photography and Aerial Forest Evaluation.

Orig Pub: Tr. Leningr. lesotekhn. akad., 1957, vyp. 81, ch.
          1, 81-89.

Abstract: On the basis of data collected in 300 test areas
          (starting in 1926) in the Mariyskaya ASSR, in the
          Buzuluksk pine forest, in the Leningradskaya,
          Chelyabinskaya, Kostromskaya, and other oblasts,

Card 1/2

COUNTRY.   USSR
CATEGORY   Forestry . Forest Management.

ABS. JOUR.   Ref Zhur-Biologiya, No.1, 1959, No. 1469

AUTHOR   Samoylovich, G.G.
INST.

TITLE   Method of Studying Aerial Evaluation Charac-
                teristics of Stands.

ORIG. PUB.   Sb. statey po ustroystvu i obsledovaniyu
                lesov. L., 1958, 26-34

ABSTRACT   No abstract

CARD: 1/1

COUNTRY   :   USSR

CATEGORY   :   Cultivated Plants. Commercial, Oleiferous. Sugar-Bearing.

ABS. JOUR.   :   Ref Zhur-Biologiya, No. 5, 1959, No. 20440

AUTHOR   :   Samoylovich, G.G.

INST.   :   Pyatigorsk Sci.Res.Station of Silk Raising.

TITLE   :   The Growth of the Shrub White Mulberry (Morus alba L.) with Different Planting Densities.

ORIG. PUB.   :   Izv. vyssh. uchebn. zavedeniy. Lesn. zh., 1953, No.1, 79-82

ABSTRACT   :   These experiments were conducted at the plantations of Pyatigorsk Scientific Research Station of Silk Raising. The number of bushes in every 1 hectare ranged between 2222 and 7575. It was established that the less distance between bushes, the smaller was the root collar diameter and the average height of the bush, the less had the crowns developed and the more poorly were the branches distributed along and across the

CARD   :   1/3

M

....DET : Cultivated Plants.

ABS. JOUR : Ref Zhur -Biologiya, No. 5, 195?, No. 20440

AUTHOR :
INST.   :
TITLE   :

ORIG. PUB :

ABSTRACT : rows. The nearer the bushes were located to
one another in the rows, the further did
the branches penetrate the crown of its
neighboring bush, and the shadowed shoots
developed stunted tops which became more
readily subject to frostbite. The crown
width both along and across the rows increased
with greater distance. The thickness of the
bark increased in thinner planting and, con-
versely, became thinner in denser planting.

CARD: 2/3

SAMOYLOVICH, G.G.

Characteristics of forests in the basin of the Abakan River
(Khakass Autonomous Province) revealed by aerial survey.
Bot. zhur. 43   no.9:1304-1310 S '58.   (MIRA 11:10)

1. Leningradskaya lesotekhnicheskaya akademiya imeni S.M.Kirova
            (Abakan Valley--Aeronautics in forestry)

SAMOYLOVICH, G.G.

Aerial methods in forest research. Trudy Lab.aeromet. 7:
257-264 '59.   (MIRA 13:1)

1. Lesotekhnicheskaya akademiya im. S.M.Kirova.
        (Aerial photogrammetry) (Forest surveys)

MIROSHNICHENKO, V.P., otv. red.; VIKTOROV, S.V., red.; KALESNIK, S.V.,
     red.; KELL', N.G., red.; LEONT'YEVA, Ye.V., red.; SAMOYLOVICH,
     G.G., red.; KUDRITSKIY, D.M., red.izd-va; KONDRAT'YEVA, M.N.,
     tekhn. red.

     [Using aerial photography methods in the study of landforms;
     transactions] Ptimenenie aerometodov v landshaftnykh issledovaniiakh;
     trudy. Moskva, Izd-vo Akad.nauk SSSR, 1961. 304 p. (MIRA 14:11)

     1. Soveshchaniye po primeneniyu aerometodov v landshaftnykh issledo-
     vaniyakh, Leningrad, 1959.
          (Aerial photogrametry--Congresses)   (Landforms)

SAMOYLOVICH, G.G.

Aerovisual phenological observations on forests in Siberia.
Mat. po fen. no.3:40-45 '62   (MIRA 18:1)

AUTHORS: Kudritskiy, D. M., Samoylovich, G. G.

TITLE: Aeromethods of studying natural resources

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 8, 1962, 18,
              abstract 8G161 K (Geografgiz, 1962, 328 pp, ill., maps, 1 r. 31 k.)

TEXT: This collected volume generalizes experience of using aeromethods
in various fields of national economy. 1) In geological-geomorphological explora-
tions (studies of morphology of ground relief, geological mapping, studies of
permafrost regions, prospecting for deposits of diamonds, ores, placers, detec-
tion of petroleum and gas-bearing areas, investigation of underwater relief and
sea coasts, aerogeophysical methods for solving geological problems and deter-
mination, from air, of rock composition); 2) In studying the soil cover (mapping
of soils from aerial photographs, studying the soils of the northern taiga zone
and Meshcherskaya lowland, study of soil erosion under conditions of forest-
steppe and arid steppe zones, studies of soils-grounds in the Western Ukraine
and Belorussia, methods of deciphering the soil cover of sub-arid zones and de-

Card 1/2

Aeromethods of studying natural resources

S/035/62/000/008/068/090
A001/A101

serts, using of colored aerial photographs in soil investigations, landscape regional devision in deciphering soils and grounds); 3) In studying plant resources (investigation of forests, deciphering of aerial photographs in geobotanic investigations, studying vegetation in assimilation of steppes and forest-steppes, studies of plant cover of semi-desert and desert zones, using aerial photographs in studies of pastures and hay fields, river valley meadows, littoral vegetation and vegetation of seas); 4) In studying water resources (studies of sea ice conditions, surface waters, detection of peat resources, deciphering of covered drainage systems, studies of changes in shores of water reservoirs); 5) In studying hunting resources (studies of distribution and population of reindeer, pinnipedia and whales). The present state and prospects of aeromethod development are described. The collected volume is dedicated to the 25th anniversary of the Commission of Aerial Photography and Photogrammetry at the USSR Geographical Society.

D. Kudritskiy

[Abstracter's note: Complete translation]

Card 2/2

SAMOYLOVICH, G.G.

Characteristics of the phenological condition of plantings in a
forest area according to aerial observations. Geog. sbor. no.16:
80-99 '63.   (MIRA 16:6)
    (Aeronautics in forestry) (Forest ecology) (Phenology)

SAMOYLOVICH, G.G.

Using aerial methods to determine the distribution of woody plants according to their flowering to study the relationship between phenological phenomenon and forest fires. Geog. sbor. no.16:100-105 '63.
(MIRA 16:6)
(Aeronautics in forestry) (Forest ecology) (Forest fires)

SAMOYLOVICH, G.G.

Ways for improving aerial forest valuation. Nauch. trudy LTA
no.99:17-20 '62.   (MIRA 17:1)

BOCHAROV, Mikhail Kuz'mich, doktor tekhn. nauk; SAMOYLOVICH.
Georgiy Georgiyevich, doktor sel'khoz. nauk

[Mathematical foundations for the interpretation of aerial
photographs of forests] Matematicheskie osnovy deshifri-
rovaniia aerosnimkov lesa. Moskva, Lesnaia promyshl., 1964.
221 p.   (MIRA 17:10)

SAMOYLOVICH, Georgiy Georgiyevich, prof. Prinimali uchastiye:
YEREMEYEV, V.S.; KUDRITSKIY, D.M.; ZENIN, F.I.; BAKH, M.K.;
CHELNOKOV, V.P.; GERTSENOVA, K.N.; RAFES, P.M.; ZAKHAROV,
P.M.; DEYNEKO, V.F., doktor tekhn. nauk, prof., retsenzent;
ZAKHAROV, V.K., prof., retsenzent; MIROSHNIKOV, V.S.. dots.,
retsenzent; BELOV, S.V., doktor sel'khoz. nauk, red.

[Use of aerial photographic surveying and airplanes in
forestry; aerial photography of forests and forest aviation]
Primenenie aerofotos"emki i aviatsii v lesnom khoziaistve;
aerofotos"emka lesov i lesnaia aviatsiia. Izd.2., dop. i
ispr. Moskva, Lesnaia promyshl., 1964. 485 p.
                                        (MIRA 17:10)
1. Kafedra lesnoy taksatsii i lesoustroystva Belorusskogo
tekhnologicheskogo instituta (for Zakharov, Miroshnikov).

SAMOYLOVICH, G.G., prof.; BELYAYEV, N.I., inzh.; KUDRITSKIY, D.M.,
dots.; GLAGOLEV, A.V., inzh.; NEFEDOV, P.M., inzh.;
GALKINA, Ye.A., st. nauchn. sotr.; PLINK, L.I., inzh.;
DONSKOY, I.P., prof., retsenzent; SAVEL'YEV, V.V., kand.
tekhn. nauk, dots., retsenzent; ALYSHEV, I.F., kand. tekhn.
nauk, dots., retsenzent; LOBANOV, A.N., prof., doktor tekhn.
nauk, retsenzent; DOROKHOV, B.A., inzh., red.

[Use of aerial photographic surveying in forest engineering]
Primenenie aerofotos"emki v lesoinzhenernom dele. Moskva,
Lesnaia promyshlennost', 1965. 354 p.   (MIRA 18:10)

1. Kafedra sukhoputnogo transporta lesa Lesotekhnicheskoy
akademii im. S.M.Kirova (for Alyshev). 2. Zamestitel' glavnogo
inzhenera Gosudarstvennogo instituta po proyektirovaniyu les-
nogo transporta (for Dorokhov).

TRET'YAKOV, Nikolay Vasil'yevich; GORSKIY, Pavel Vasil'yevich;
    SAMOYLOVICH, Georgiy Georgiyevich

    [Manual for a timber cruiser; tables for forest valuation]
    Spravochnik taksatora; tablitsy dlia taksatsii lesa. 2.,
    perer. izd. Moskva, Lesnaia promyshlennost', 1965. 457 p.
                                        (MIRA 19:1)

SAMOYLCVICH, G.D., inzh.

The Tikhoretskaya - Tuapse petroleum pipeline. Stroi.truboprov.
7 no.9:19-21 S '62.   (MIRA 15:11)

1. Trest Yuzhgazprovodstroy, Rostov-na-Donu.
                    (Petroleum--Pipelines)

SAMOYLOVICH, G. S., ENGINEER

"Effective Method for Constructing a Potential Flow
Around Hydrodynamic Grids of Small Pitch." Thesis for
degree of Cand. Technical Sci., Sub 18 Feb 49, Moscow
Order of Lenin Power Engineering Inst imeni V. M. Molotov.

Summary 82, 18 Dec 52, Dissertations Presented for
Degrees in Science and Engineering in Moscow in 1949.
From Vechernyaya Moskva, Jan-Dec 1949.

SAMOILOVICH, G.S.

Raschet gidrodinamicheskikh reshetok. (Prikladnaia matematika i mekhanika, 1950, v. 14, p. 121-138, diagrs., bibliography)
Title tr.: Design of hydrodynamic blade grids. Reviewed by E. Leimanis in Mathematical Reviews, 1950, v. 11, no. 10, p. 750.

QA801. P7 1950

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

SAMOYLOVICH, G.S.

Samoĭlovič, G. S.   Calculation of hydrodynamical lattices.
Akad. Nauk SSSR. Prikl. Mat. Meh. 14, 121–138 (1950).
(Russian)

The author gives a general method of calculating the flow around a lattice of profiles when the flow around one profile is known. Consider a region G exterior to the given lattice of unit circles with gap l in the z-plane and the region g exterior to the given lattice of profiles L with gap l_1 in the ζ-plane. The gap l_1 and the form of the profile L are assumed to be arbitrary. The method consists in constructing a function which maps conformally the region G on the region g, assuming that the function which maps the region exterior to the unit circle about the origin into the region exterior to the single profile L is known. Let the infinities in both planes correspond. Then the mapping function can be written in [...] $P(z)$ where [...] has the following proper- [...] of z with period il. [...] it remains bounded for $z \to \infty$; and (iii) in any neighborhood of the origin, and therefore, because of the periodicity of $P(z)$ in the neighborhood of any circle, the expansion $P(z) = \sum_{n=-\infty}^{\infty} a_n z^n$ is valid. The author obtains for ζ the expression

$$(1) \quad \zeta = az + \frac{\pi}{l} \sum_{n=0}^{\infty} \frac{(-1)^n}{n!} a_{-(n+1)} \frac{d^n}{dz^n} \coth \frac{\pi z}{l},$$

where $a_{-n} = (2\pi i)^{-1} \int P(w) w^{n-1} dw$ and where the integration is performed along a unit circle about the origin. The series (1) plays for the calculation of hydrodynamical lattices the same role as the Laurent series in mapping the region exterior to the unit circle around the origin on the exterior of a single profile L.

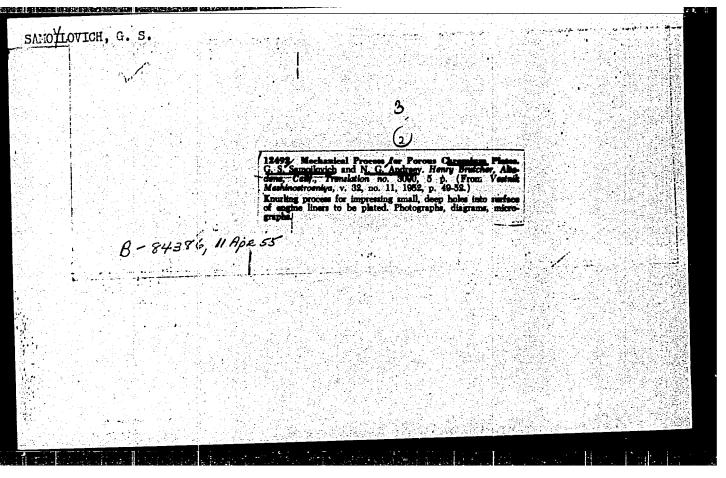For the complex potential $F(\zeta)$ of the lattice flow the expansion:

$$(2) \quad F(\zeta) = \left(aW - \frac{\lambda \Gamma}{2\pi i}\right) z(\zeta) + \frac{\Gamma}{2\pi i} \ln \frac{1}{\lambda} \sinh \lambda z(\zeta)$$

$$+ \lambda \sum_{n=0}^{\infty} \frac{(-1)^n}{n!} a_{-(n+1)} \frac{d^n}{dz^n} \coth \lambda z(\zeta)$$

is obtained, where Γ is the circulation around a single profile L. In the limiting case when $\lambda = \pi/l \to 0$, i.e., when $l \to \infty$, the mapping series (1) goes over into the corresponding Laurent series and (2) into the well-known expression for the complex potential of the flow past a single profile L. A method of calculating the coefficients a and a_{-n} of the series (1) for given λ in terms of the coefficients c_i and c_{-n} of the corresponding Laurent series is then given. As examples the calculation of potential flow through a lattice of circles and through the blades of a steam turbine is given.

                                    E. Leimanis (Vancouver, B. C.).

Source: Mathematical Reviews,   Vol 11 No.

Moscow Power Inst.

SAMOYLOVICH, G. S.

Steam turbines (book of problems). Moskva, Gos. energ. izd-vo 1952. 251 p. (54-24382)

TJ737.S3

SAMOYLOVICH, G. S.

3

(2)

12492. **Mechanical Process for Porous Chromium Plates.**
G. S. Samoilovich and N. G. Andreev. *Henry Brutcher, Alta-
dena, Calif.; Translation no. 3000, 5 p. (From Vestnik
Mashinostroeniya, v. 32, no. 11, 1952, p. 49-52.)*
Knurling process for impressing small, deep holes into surface
of engine liners to be plated. Photographs, diagrams, micro-
graphs.

B - 84386, 11 Apr 55

SAMOYLOVICH, G. S.

May/June 53

USSR/ Mathematics - Wing Lattice

"Criticism of S. V. Vallander's Article 'Calculation of the Circulation Around a Wing Lattice' in DAN SSSR, Vol 82, No 3, p 345, 1952," G. S. Samoylovich and G. Yu. Stepanov.

Prik Mat i Mekh, Vol 17, No 3, pp 387-388

The Critics point out an error in Vallander's article and state that his method for representing a function reflecting the exterior of a unit circle from the zeta-plane into the exterior of an arbitrary wing lattice in the z-plane in the form of a sum of two functions $z = z_1(\zeta) + z_2(\zeta)$ is not new and belongs to L. A. Simonov (See S. F. Abramovich, "Application of N. Ye. Zhukovskiy's Method to the Study of Circulation Around Wing Lattices of Finite Thickness," Inzhen Sbo, Vol 8, 1950). The authors state that a similar method was proposed by K. Hirose (Trans Soc Mech Engrs Japan, Vol 15, No 44, 1948 (reviewed in Appl Mech Rev, Vol 3, No 4, 1950)).

RUNOV, Boris Tikhonovich; SAMOYLOVICH, G.S., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor.

[Vibration tests of vanes of steam turbines in electric power stations] Vibratsionnye ispytaniia lopatochnogo apparata parovykh turbin na elektrostantsiiakh. Moskva, Gos.energeticheskoe izd-vo, 1954. 199 p.   (MLRA 8:3)
        (Steam turbines--Testing)

SAMOYLOVICH, G.S

1536. Samoilovich, G. S. Investigation of aerodynamic gratings at high, near-sonic, and super-sonic velocities (in Russian). Izv. Akad. Nauk SSSR Otd. tekh. Nauk no. 9, 80-84, Sept. 1954. Several static and pitot tubes, and yawmeters in use in Moscow Energy Institute, are briefly described, with a schematic diagram of an electronic ancillary equipment. Instruments are claimed of very high efficiency in transonic and supersonic flow.

G. Moretti, Argentina

SAMOYLOVICH, G. S.

USSR/ Engineering - Crankshaft production

Card   :   1/1

Authors   :   Samoylovich, G. S., Engineer; Vasil'kov, E. M., Engineer

Title   :   On the effect of the intrinsic weight of a multiple-bearing crankshaft in the determination of the magnitude of pulsation of the shaft journal and the plane of the residual sagging of its axis

Periodical :   Vest. Mash., 34, Ed. 6, 96 - 99, June 1954

Abstract   :   The effect of crankshaft weight (internal combustion engines) on journal vibration and the plane of residual sagging of its axis is dealt with. Methods were developed for the exact computation of this effect. Graphs; drawings.

Institution :   ...

Submitted   :   ...

SHERSTYUK, Aleksandr Nikolayevich; SAMOYLOVICH, G.S., redaktor; VORONIN,
K.P., tekhnicheskiy redaktor.

[Axial flow compressors; aerodynamic calculations] Osevye kompresso-
ry; aerodinamicheskiy raschet. Moskva, Gos.izd-vo, 1955. 247 p.
(Air compressors)   (MIRA 8:4)

SAMOYLOVICH, Georgiy Semenovich; TROYANOVSKIY, Boris Mikhaylovich; DEICH,
M.Ye., redaktor; SHCHEGLYAYEV, A.V., redaktor; FRIDKIN, A.M., tekh-
nicheskiy redaktor.

[Variable working cycle of steam turbines] Peremennyi reshim raboty
parovykh turbin. Pod red. A.V.Shchegliaeva. Moskva, Gos.energ.izd-vo
1955. 280 p. [Microfilm]   (MIRA 8:5)

1. Chlen-korrespondent AN SSSR (for Shcheglyayev).
        (Steam turbines)

SAMOYLOVICH, G.S., inzhener;VASIL'KOV, Ye.M., inzhener.

Straightening multiple-bearing crankshafts by surface cold-
hardening. Vest.mash. 35:no.10:25-29 O '55.   (MIRA 9:1)

(Cranks and crankshafts) (Steel--Hardening)

AID P - 4807

Subject   : USSR/Engineering

Card 1/1   Pub. 110-a - 10/17

Author   : Samoylovich, G. S., Kand. Tech. Sci.

Title   : American steam turbines of supercritical pressure
               (News From Abroad).

Periodical : Teploenergetika 3,7, 50-54, J1 1956

Abstract   : Describes the design of and gives the basic data on the
               first industrial steam turbine of the General Electric
               Company, as well as on two turbines of supercritical
               pressure, which will be manufactured by Westinghouse.
               Illustrations, diagrams. 2 American references.

Institution : None

Submitted   : No date

SOV/137-57-6-10427

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 146 (USSR)

AUTHOR: Samoylovich, G.S.

TITLE: Straightening of Steel Machine Parts by Surface Cold Hardening
            (Pravka stal'nykh detaley poverkhnostnym naklepom)

PERIODICAL: V sb.: Povysheniye iznosostoykosti i sroka sluzhby mashin.
             Kiyev-Moscow, Mashgiz, 1956, pp 295-303

ABSTRACT: The author points out the feasibility of using the deformation
             occurring as the result of local cold hardening of the surface for
             straightening articles of complex shape. This method has a number
             of advantages over the straightening of similar machine parts under
             a press. Straightening by means of surface cold hardening does not
             decrease the fatigue resistance of machine parts, the procedure is
             easily controlled, and a high precision of the setting is ensured.
             The technique of the straightening and the equipment therefor are
             simpler than those required for press straightening. Very small
             local deformations can be obtained by surface cold hardening. The
             shape of the machine parts produced by the straightening remains
Card 1/2   stable with time. The technique is elaborated relative to the

SOV/137-57-6-10427

Straightening of Steel Machine Parts by Surface Cold Hardening

straightening of crankshafts of various engines and other machine parts with sur-
face cold hardening. To straighten a shaft it is necessary to determine the direc-
tion of its camber and to cold harden the surface on the convex side. In straighten-
ing a speed-reducer shaft the cold hardening is done on one side. The progress
of the cold-hardening process are controlled by the dimensions of the imprints of
the hammer head left after each blow on the surface of the shaft.

M.Ch.

Card 2/2

AID P - 4961

Subject   : USSR/Engineering

Card 1/1   Pub. 110-a - 10/21

Author   : Samoylovich, G. S.

Title   : American power reactors to be put in operation in 1956-
                1960 (News From Abroad).

Periodical   : Teploenergetika [3] 8, 50, Ag 1956

Abstract   : A table is presented copied from "Power Engineering",
                March 1956.

Institution : None

Submitted   : No date

AID P - 4962

Subject   : USSR/Engineering

Card 1/1   Pub. 110-a   -   11/21

Author   : Samoylovich, G. S., Kand. Tech. Sci.

Title   : Clifty Creek and Kyger Creek Plants started operation
                 (News From Abroad).

Periodical   : Teploenergetika,3, 8, 51, Ag 1956

Abstract   : Brief description of two power stations (largest in the
                 world) on the Ohio River, taken from the March issue
                 (1956) of "Power Engineering".

Institution   : None

Submitted   : No date

SAMOYLOVICH, G.S., kandidat tekhnicheskikh nauk; TRYANOVSKIY, B.M.,
     kandidat tekhnicheskikh nauk.

     "Steam turbines." P.N.Shliakhin. Reviewed by G.S.Samoilovich,
     B.M.Trianovskii. Teploenergetika 3 no.12:60 D '56. (MLRA 9:12)
                    (Steam turbines)   (Shliakhin, P.N.)

SAMOYLOVICH, Georgiy Semenovich; TROYANOVSKIY, Boris Mikhaylovich; KOSTYUK,
A.G., red.; MEDVEDEV, L.Ya., tekhn.red.

[Steam turbines; a collection of problems] Parovye turbiny;
sbornik zadach. Izd. 2-oe, dop. i perer. Moskva, Gos. energ.
izd-vo, 1957. 274 p.   (MIRA 11:2)
        (Steam turbines--Problems, exercises, etc.)

AUTHORS: Deych, M.E. (Cand. Tech. Sci.), Samoylovich, G.S. (Cand.
               Tech.Sci.), Troyanovskiy, B.M. (Cand. Tech. Sci.),
               Kazintsev, F.V. (Engineer) and Lipatnikov, S.N. (Eng.)

TITLE: Investigation of two-crown regulating stages in an
               experimental steam turbine. (Issledovaniye dvukhvenechnykh
               reguliruyushchikh stupeney v parovoy eksperimental'noy
               turbine).

PERIODICAL: "Teploenergetika" (Thermal Power), Vol.4, No.5, May,1957,
                              pp.35-41 (U.S.S.R.)

ABSTRACT: Operating test results have shown that the regulating
               stages having two sets of blading on a single runner
               that are used by steam turbine factories are of low
               efficiency. Therefore, turbine designers try to avoid
               the use of such stages in high power turbines. However,
               hitherto, such stages have not been systematically
               investigated, the reasons for their low efficiency have
               not been established and methods of improving the
               efficiency have not been indicated. This article describes
               new 2-crown regulating stages that have been developed in
               the Moscow Power Institute intended for various heat drops
               and steam consumptions. The explanations of the type of
               stage and of the experimental conditions are all expressed
               in terms of Soviet conventional notation which is assumed
               to be so familiar to the reader as to require no explanation.
               The experimental set-up is described, the available
               experimental turbine having the following limiting

Investigation of the two-crown regulating stages in an
experimental steam turbine. (Cont.)

conditions: maximum power 600 kW, maximum speed 12 000
r.p.m.; initial pressure 1 to 5 atm.; maximum initial
temperature 150 to 300°C and exhaust pressure 0.1 to
2 atm. The turbine is loaded by a hydraulic brake.
The main geometrical characteristic of the stages tested
are described with full information about blade profiles
and dimensions. The results of the tests are
presented in the form of graphs of the internal and
blade efficiencies.
     The experiments carried out were of a preliminary
nature. For a number of operational reasons unstable
conditions were obtained with a deep vacuum beyond the
stage and it was, therefore, impossible to obtain a
reliable efficiency value for certain conditions and
particularly for low Reynolds numbers. Moreover, the
relative error of the experiment is higher with deep
vacuums because the power of the stage is less.
However, the test results are of interest in that they
give a qualitative picture of the relationship between
efficiency and Reynolds number. Graphs illustrating this
point are given. Information is also given about changes
in the reaction under different conditions and the
results of investigations on the stages with partial
supply of steam. Some results are also given on a

SAMOYLOVICH, G.S., kandidat tekhnicheskikh nauk; MOROZOV, B.I.

Expenditure coefficients through unloading openings of turbine
discs [with summary in English]. Teploenergetika 4 no.8:18-23
Ag '57.   (MIRA 10:9)

1. Moskovskiy energeticheskiy institut.
                        (Turbines)

SOV/24-58-4-11/39

AUTHORS: Samoylovich, G.S. and Sherstyuk, A.N. (Moscow)

TITLE: The Calculation of Curvilinear Axisymmetric Channels
              (Raschet krivolineynykh osesimmetrichnykh kanalov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh
              Nauk, 1958, Nr 4, pp 78 - 81 (USSR)

ABSTRACT: A method is described for the approximate calculation
              of the potential flow of an incompressible fluid in
              axisymmetric curvilinear channels (the intakes of
              centrifugal and axial compressors, diffusers at the
              exhausts of axial compressors, etc.). The calculation
              is based on a generalisation of the method of calculating
              plane curvilinear channels (Ref 1). There is a comparison
              between the calculated results and exact solutions. Good
              agreement is obtained. There are 5 figures and 1 Soviet
              reference.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power
              Institute)

SUBMITTED: October 24, 1957

Card 1/1

DEYCH, M.Ye., prof. doktor tekhn. nauk; SAMOYLOVICH, G.S., dots. kand. tekhn. nauk; KAZINTSEV, P.V., inzh.

Setup for automatizing the static tests of turbine cascades. Energomashi-nostroenie 4 no.9:4-8 S '58.   (MIRA 11:11)
            (Turbines—Aerodynamics)

SAMOYLOVICH, G. S.

10(0)   PHASE I BOOK EXPLOITATION   SOV/2214

Deych, Mikhail Yefimovich, and Georgiy Semenovich Samoylovich

Osnovy aerodinamiki osevykh turbomashin (Fundamentals of the Aero-
    dynamics of Axial-flow Turbomachinery) Moscow, Mashgiz, 1959, 427
    p. Errata slip inserted. 3,500 copies printed.

Reviewer: V.S. Beknev, Candidate of Technical Sciences; Eds.: A.N.
    Sherstyuk, Candidate of Technical Sciences, Docent, and A.Ye.
    Zaryankin, Candidate of Technical Sciences; Tech. Ed.: B.I. Model;
    Managing Ed. for Literature on General Technical and Transport
    Machine Building: V.I. Kubarev, Engineer.

PURPOSE: This book is intended for engineers, scientific workers,
    and aspirants. It may also be used by students of advanced courses
    of power engineering institutes.

COVERAGE: This book deals with theoretical and experimental work on
    the aerodynamics of axial-flow turbomachines and the methods of

Card 1/10

Fundamentals of the Aerodynamics (Cont.)   SOV/2214

analyzing the flow of viscous fluids and perfect fluids over aero-
dynamic cascades of blades. The results of systematic investiga-
tion of subsonic and supersonic flow in plane, straight, and an-
nular cascades are given. It includes the basic aspects of three-
dimensional flow in the stages of turbomachines, and nonstationary
and burble phenomena in the stages of axial-flow compressors.
Methods for experimental investigation and the experimental appa-
ratus are described. The book also gives a generalization of some
theoretical and experimental results obtained at the MEI (Moscow
Power Engineering Institute) and other Soviet and non-Soviet or-
ganizations and laboratories. Much experimental material was ob-
tained in the steam-and gas-turbine laboratory of the Moscow
Power Engineering Institute (1957 included) by the gas-turbine
group. The following persons took part in the investigations:
Candidates of Technical Sciences B.M. Troyanovskiy, A.N. Sherst-
yuk, V.A. Baranov; Engineers V.I. Abramov, L.Ye. Kiselev, Ye.V.
Mayorskiy, I. Neruda, M.F. Zatsepin, V.P. Mayorskiy, G.A. Filippov,
V.G. Filippova, Ye. V. Stekol'shchikov, V.P. Novoderezhkin; and
Senior Laboratory Technicians N.S. Sokolov and P. D. Kustov. Many
of the investigations were carried out in conjunction with the
Kaluzhskiy turbinnyy zavod (Kaluga Turbine Plant) and the Lenin-

Card 2/10

Fundamentals of the Aerodynamics (Cont.)   SOV/2214

yenko, R.M. Fedorov, Yu.I. Shvets, L.G. ILoytsyanskiy, L.Ye.
Kalikhman, N.M. Markov, B.M.Yakob, G.Flyngel, N.A. Sknar', A.N.
Krylov, I.I. Kirillov, G.N. Abramovich, M.A. Lement'yev, B.N.
Yuryev, V.P. Vetchinkin, K.A. Umakov, V.V. Uvarov, V.G. Tyryshkin,
S.I. Shevyakov, P.K. Kazandzhan, L.P. Lokoy, V.N. Yershov, A.M.
Zavadovskiy, S.V. Grishchukov, S.M. Shlyakhtenko, and N.I. Pan-
teleyev.

TABLE OF CONTENTS:

Card 4/10

SAMOYLOVICH, G.S., kand.tekhn.nauk; MAYORSKIY, Ye.V., inzh.; NERUDA, I.,
    inzh.; STEKOL'SHCHIKOV, Ye.V., inzh.

Low-inertia tensiometric testing devices for the investigation
of unsteady processes in turbines [with summary in English].
Teploenergetika 6 no.1:59-62 Ja '59.   (MIRA 12:1)

1. Moskovskiy energeticheskiy institut.
              (Turbines--Testing)

SAMOYLOVICH, Georgiy Semenovich; KOSTYUK, A.G., red.; BORUNOV, N.I.,
tekhn.red.

[Present-day steam turbines] Sovremennye parovye turbiny.
Moskva, Gos.energ.izd-vo, 1960. 127 p. (Biblioteka teplotekhnika,
no.7).   (MIRA 13:6)
                (Steam turbines)

SAmuy Lovich, G.S.

PHASE I BOOK EXPLOITATION   SOV/4017

Leningradskiy metallicheskiy zavod.   Otdel tekhnicheskoy informatsii

Issledovaniya elementov parovykh i gazovykh turbin i osevykh kompres-
    sorov (Investigations of the Components of Steam and Gas Turbines
    and Axial-Flow Compressors) Moscow, Mashgiz, 1960. 488 p. (Series:
    Its: Sbornik, No. 6) Errata slip inserted. 3,200 copies printed.

Sponsoring Agency: RSFSR. Leningradskiy ekonomicheskiy administra-
    tivnyy rayon.   Sovet narodnogo khozyaystva. Upravleniye tyazhelogo
    mashinostroyeniya.

Ed.: A.S. Zil'berman, Candidate of Technical Sciences; Eds.:of
    Publishing House: V.P. Vasil'yeva and N.Z. Simonovskiy; Tech.
    Ed.: O.V. Speranskaya; Managing Ed. for Literature on the Design
    and Operation of Machines (Leningrad Division, Mashgiz): F.I. Feti-
    sov, Engineer; Editorial Board of Series: A.S. Zil'berman, Can-
    didate of Technical Sciences; M.M. Koren', Engineer; V.K. Naumov,
    Candidate of Technical Sciences; and I.N. Shibalov, Engineer.

PURPOSE: This collection of articles is intended for engineering
    and technical personnel of turbine-construction plants and

Card 1/22

Investigations of the Components (Cont.)   SOV/4017

related organizations and may also be used by engineers and tech-
nicians at power plants employing steam and gas turbines.

COVERAGE: The collection contains 43 reports which present the
methods and results of investigations of the working process
and the statics and dynamics of the operation of turbine and
axial-flow compressor components. Also described are test
setups, devices, and apparatus. The first part of the collec-
tion deals with the aerodynamics of turbine and compressor
components. The following members of the aerodynamic, compressor,
and turbine laboratories took part in the work; D.M. Reshet'ko,
V.I. Zemlyanskiy, Ye.A. Rusakova, the technicians T.Ya. Kiyanova,
V.I. Karabach, N.D. Yegorova, and innovators N.K. Tutayev, and
I.I. Gribanov. The second part of the collection consists of
reports which illustrate that part of the work of the Laboratory
(Central Laboratory of the Design Office for Steam and Gas Tur-
bines of the Leningrad Metal Plant) concerned with the study
of vibrations of turbines and their components, particularly
the blades. The following members of the vibration laboratory
participated in the work: Engineers I.D. Novikova, G.L. Lyudin,
and V.I. Melent'yeva, technicians and workers A.N. Krasheninnikov,
V.I. Zimin, Yu.G. Kazinov, and Ye.P. Kudryavtsev. The third part

Card 2/14

Investigations of the Components (Cont.)   SOV/4017

is concerned with the calculation and experimental study of the
state of stress and the deformations of turbine components. This
work was performed by the Turbine-Component Laboratory. Person-
alities mentioned are the head of this laboratory M.M. Koren',
Engineers Ye.S. Zugrova and I.V. Urinson, technicians and workers
S.F. Senshenok, and Z.K. Shul'gina. The last part contains arti-
cles dealing with instruments, apparatus, and test setups. At
the end of the collection methods for producing rotating parts
of experimental turbines and compressors are presented. Person-
alities mentioned are the supervisors of the shop of the laboratory
N.N. Frolova and G.P. Gavrilova, the leading innovators Ye.V.
Markova, I.I. Gvozdeva, and V.P. Troynikova. References are to
be found at the end of 24 of the 43 articles.

TABLE OF CONTENTS:

Preface   3

Card 3/21

4

PART I. WORKING PROCESS

Card   4/22

30239
S/145/60/000/002/007/020
D221/D302

26.2120

AUTHOR: Samoylovich, G.S., Candidate of Technical Sciences,
             Docent

TITLE: Investigating transient aerodynamic phenomena in
             axial compressors

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashino-
             stroyeniye, no. 2, 1960, 66 - 77

TEXT: The author describes experiments in connection with self-
oscillations due to a periodic source of power as well as vibra-
tions produced by self-excited transient asymmetry of flow. The
probes used for measuring the speed of pulsations, static pressure
etc. were required to possess adequate natural frequency to avoid
distortion of transient phenomena, and to be small sized. The
tests were carried out with ГТ-12 (GT-12) gas turbine compressors,
made by a Leningrad metal factory. It is noticed that during thrott-
ling, when the inlet angle of flow past the blades approximates to
the value of break-off, then the latter phenomenon does not take

Card 1/4

30239

S/145/60/000/002/007/020
D221/D502

Investigating transient aerodynamic ...

place on all blades at the same time. It appears, however, in a certain group of blades which is movable, and therefore, this phenomenon is called the rotary break-off. The experimental characteristic is considered and is plotted in dimensionless coordinates. White points were obtained during the reduction of flow, and black – when it was increasing. The oscillograms quoted by the author allow calculation of an arc taken up by the break-off in relation to the perimeter as well as the speed of break-off. The analysis of results reveals that there is only one break-off zone which covers the whole height of blades. The static pressure and the speed of flow are also variable, as can be seen from the oscillograms. The speed of the stream was measured with a thermoanemometer that fed the signal to the scope. It is possible to deduce that there is a clear division of zones with and without the break-off. The air flow in the break-off region is small or even reversed. The balance of flows is given by $Q = Q_1 - Q_2$, where Q_1 is the stream in the unbroken zone, and Q_2 – in the break-off zone. Both are defined by

$$Q_1 = K_1 \varphi_1 F(1 - e)u$$

Card 2/4

30239

S/145/60/000/002/007/020

Investigating transient aerodynamic ...   D221/D302

and
$$Q_2 = K_2 \sqrt{\frac{\Delta p}{\rho}} \, F \, e,$$

where K_1 and K_2 are coefficients, Δp is the drop of pressure per stage, F is the ring surface at the inlet of the impeller, and e is given by

$$e = \frac{k_1 \varphi_1 - \varphi}{k_1 \varphi_1 + k_2 \sqrt{\psi}} .$$

In the case of break-off phenomenon, air vibration is noticed only in the blades of rotor. The air masses in the line did not parti- cipate in vibrations. The break-off flutter, contrary to the avia- tion flutter, has no two degrees of freedom, and blades are subject to torsional vibrations only. The flutter at over-critical angles of flow is characterized by the relatively low speed of the stream, and, therefore, is dangerous for the blades. The aerodynamic pro- cesses are involved, when hysteresis in the break-off flutter is of importance. The flow has a three-dimensional character, where roots of blades absorb the energy of the stream, and their upper

Card 3/4

30239
Investigating transient aerodynamic ...   S/145/60/000/002/007/020
D221/D302

parts work in conditions of aerodynamic damping. Experimental in-
vestigations are required to evaluate these dynamic stresses. Spo-
radic vibrations are also noticed due to transient conditions. Va-
riations of stresses with changes in the angle of inlet as well as
with the number of Mach are quoted. The above method was used when
checking a 12000 KW gas turbine compressor of ЛМЗ (LMZ). There are
9 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power
                Institute)

SUBMITTED: December 15, 1959

Card 4/4

SÁMOYLOVICH, G.S., kand.tekhn.nauk; KHANIN, G.A., kand.tekhn.nauk

Investigating unsteady aerodynamic phenomena in model and actual
multistage axial-flow compressors. [Trudy] LMZ no.6:56-64 '60.
(MIRA 13:12)

(Compressors—Aerodynamics)

26126
S/040/61/025/004/005/021
D274/D306

|D |2 |D

AUTHOR: Samoylovich, G.S. (Moscow)

TITLE: Flow through an aerodynamic cascade of thin oscilla-
               ting airfoils

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 4,
               1961, 630-645

TEXT: The unsteady flow of an incompressible fluid is considered
through a cascade of airfoils which oscillate with different fre-
quencies, phases and amplitudes; translation- and rotation oscilla-
tions are considered. The associated masses and forces are deter-
mined. In a number of cases, approximate formulas are derived,
which are compared with accurate formulas. With infinitely large
cascade pitch, the obtained formulas reduce to the known solutions
for a single oscillating airfoil; L.I. Sedov (Ref. 1: Ploskiye
zadachi gidrodinamiki i aerodinamiki (Plane Problems of Hydrodyna-
mics and Aerodynamics), Gostekhteoretizdat, 1950). In the formula-
tion of the boundary conditions, the airfoil blades can be replaced

Card 1/6

26126
S/040/61/025/004/005/021
Flow through an aerodynamic cascade...   D274/D306

by plates, as the blades are thin, slightly bent and at small angle
of attack. The equations of motion can be linearized. The solution
to the oscillation problem can be obtained by adding the solution
for the steady flow through the cascade of airfoils and the solution
for the unsteady flow through the cascade of plates. The first prob-
lem has been completely solved (Ref. 1: Op.cit). In the following,
only the unsteady flow is considered. The boundary conditions are:
At any instant the normal velocity- and acceleration components
(the latter are linearized) of the fluid particles are known. It is
also assumed that the Chaplygin-Zhukovskiy conditions are satisfied
at the trailing edges of the oscillating airfoils. The problem con-
sists in determining the velocity- and pressure fields, as well as
the unsteady forces and moments which act on the oscillating air-
foils. A complex acceleration potential φ is introduced:

$$w = \varphi + i\psi = f(z) \tag{1.1}$$

Periodic functions $F(z,q)$ and $P(z,q)$ are introduced, as well as
$\phi(z,q)$ and $Q(z,q)$ which were obtained from the first two functions
by a half-period shift; these functions correspond to the complex

Card 2/6

26126
S/040/61/025/004/005/021
Flow through an aerodynamic cascade...   D274/D306

velocity-potential of transverse and circulation flow (q is a real constant). If the oscillations of the airfoils are synchronous and cophasal, the complex acceleration potential is:

$$w = \sum_{n=1}^{\infty} A_n \left[F(z,q) - z + q^{-1}\ln \text{ch } q\right]^n +$$

$$+ iB \left[\text{ch}q \, F'(z,q) - q^{-1} \text{ sh}qP'(z,q)\right] \qquad (3.1)$$

or (after transformation)

$$w = \sum_{n=1}^{\infty} A_n \left[F(z,q) - z + q^{-1}\ln \text{ch } q\right]^n + iB\sqrt{\frac{\text{sh } q \,(z-1)}{\text{sh } q \,(z+1)}} \qquad (3.2)$$

A_n and B are determined by the boundary conditions. With infinite pitch $t \to \infty \,(q \to 0)$, Eq. (3.1) becomes

$$w = \sum_{n=1}^{\infty} A_n \left(\sqrt{z^2-1} - z\right)^n + iB\sqrt{\frac{z-1}{z+1}} \qquad (3.4)$$

On the determination of associated masses, the pressure due to

Card 3/6

26126

Flow through an aerodynamic cascade...

inertial forces of the fluid surrounding the cascade is accounted
for by the associated masses. This is the case of oscillating air-
foils without flow through the cascade. The masses are determined
for the following particular cases: a) Synchronous cophasal buck-
ling flexural oscillations of airfoils; b) Synchronous cophasal
torsional oscillations; c) Synchronous buckling counter-phase
oscillations, and d) Synchronous torsional counter-phase oscilla-
tions. For case a), an exact expression is found (known from Ref.
1); an approximate expression is also found:

$$\Delta m = \rho \frac{bt}{2} \text{ arc tg sh } \frac{\pi b}{2t} \qquad (4.4)$$

In the limit (b/t → 0), the approximate expression coincides with
the exact expression for an isolated plate. For case b), the re-
lation between exact and approximate formula is analogous. For case
c) and d), approximate formulas are given. Flow through a line cas-
cade is considered. Several cases are discussed: a) Synchronous
cophasal buckling oscillations; b) Buckling oscillations with dif-
ferent frequencies, phases and amplitudes (for various airfoils);
c) Synchronous cophasal torsional oscillations; d) Torsional oscil-

Card 4/6

26126

S/040/61/025/004/005/021
Flow through an aerodynamic cascade...   D274/D306

lations with different frequency phases, and amplitudes. In case
a) the pressure is found to be equal in value and of opposite sign
on both sides of the airfoil; formulas for the forces are given.
For case b) the effect of the forces can be reduced (in nearly all
instances) to that of associated masses. For case c) the normal
acceleration-component becomes

$$a_y = -A_1 - 2A_2 \left(\frac{sh\ qx}{q\sqrt{sh^2\ q - sh^2\ qx}}\ arc\ sin\ \frac{\sqrt{sh^2 q - sh^2\ qx}}{ch\ q} + x \right)$$

(5.32)

in the limit (infinite pitch), the parenthesis in Eq. (5.32) equals
2x, i.e. it gives the exact solution for an isolated airfoil; it
is noted that the expression in parenthesis nearly linear, i.e.
it practically gives an exact solution even in case of a dense cas-
cade. For case d), the problem is solved by retaining, in the ser-
ies expansion for the acceleration potential, the first terms only.
On flow through the oblique cascade, calculation of such a flow can
be reduced to calculating the flow through line cascades by using
the method of conformal transformations; thereby the line cascade

Card 5/6

25126

S/040/61/025/004/005/021
Flow through an aerodynamic cascade...   D274/D306

is transformed into an oblique cascade. Two examples are given,
for the complex acceleration potential in particular cases. There
are 2 figures and 16 references: 6 Soviet-bloc and 10 non-Soviet-
bloc. The references to the English-language publications read as
follows: C.C. Chang, W.H. Chu, Aerodynamic interference of cascade
blades in synchronized oscillation. Journ. of Appl. Mech., 1955, no.
4; L.C. Woods, On unsteady flow through a cascade of airfoils. Proc.
Royal Soc., 1955, ser. A, no. 1172; F. Sisto, Unsteady aerodynamic
reactions on airfoil in cascade. Journ. Aeron. Sci., 1955, no. 5;
E. Meister, Flow of an incompressible fluid through an oscillating
staggered cascade, Arch. for Rat. Mech. and Anal., 1960, no. 3.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power
               Engineering Institute)

SUBMITTED: April 17, 1961

Card 6/6

SAMOYLOVICH, G.S. (Moskva)

Unsteady vortical flow around a lattice having thin vibrating profiles. Prikl. mat. i mekh. 25 no.5:851-357 S-O '61.

(MIRA 114:10)

(Hydrodynamics)

SAMOYLOVICH, G.,S. (Moskva)

Unsteady aerodynamic forces and dynamic stresses in blades in
the presence of resonance vibrations caused by vortex wakes.
Izv.AN SSSR.Otd.tekh.nauk.Mekh. i mashinostr. no.4:32-41 Jl-Ag
'62.

(Blades—Vibration) (Wakes (Fluid dynamics))   (MIRA 15:8)

SAMOYLOVICH, G.S., kand.tekhn.nauk; PIS'MIN, I.N., inzh.

Measurement of pressure fluctuations and dynamic stresses in the moving blades of an axial compressor. Teploenergetika 9 no.8:51-55 Ag '62.

(MIRA 15:7)

1. Moskovskiy energeticheskiy institut.
(Compressors)

S/040/62/026/001/014/023
D237/D304

AUTHOR: Samoylovich, G.S. (Moscow)

TITLE: On solving a non-steady flow around a lattice of arbitrary
               profiles, vibrating with an arbitrary phase shift

PERIODICAL: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Pri-
               kladnaya matematika i mekhanika, v. 26, no. 1, 1962,
               126-137

TEXT: A non-steady flow of ideal incompressible fluid around a lattice
of arbitrary profiles is considered. Perturbed motion of fluid is caused
by small amplitude vibrations of blades in the lattice and the problem is
stated in terms of a complex variable. Conditions to be satisfied by the
complex potential on the vibrating profiles are given, and a special com-
plex function F (z, t, α) where t, α are real parameters is derived and
expressed as a convergent Laurent series which is then used to obtain the
solution, describing the velocity distribution on any contour at any
instant of time, for the blades vibrating synchronously, but with an

Card 1/2

On solving a non-steady ...

S/040/62/026/001/014/023
D237/D304

arbitrary phase shift. A numerical example is given. Pure circulation
with phase shift is discussed next and for the flow with variable circu-
lation, a quasi-steady problem and, at the same time, the exact problem
of steady flow with variable circulation, are solved. The solutions ob-
tained are applicable in the case of the profiles not only vibrating, but
also undergoing small deformations at the same time, and the generaliza-
tion to a non-constant phase shift lead only to more complex numerical
calculations. There are 6 figures and 4 Soviet-bloc references.

SUBMITTED: October 20, 1961

Card 2/2

SAMOYLOVICH, G.S. (Moskva)

Bending and torsional flutter of blades in a dense aerodynamic cascade.
Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.6:72-77 N-D '62.
(MIRA 15:12)

(Flutter (Aerodynamics))

KOSTYUK, Askol'd Glebovich, kand. tekhn. nauk, dots.; SAMOYLOVICH,
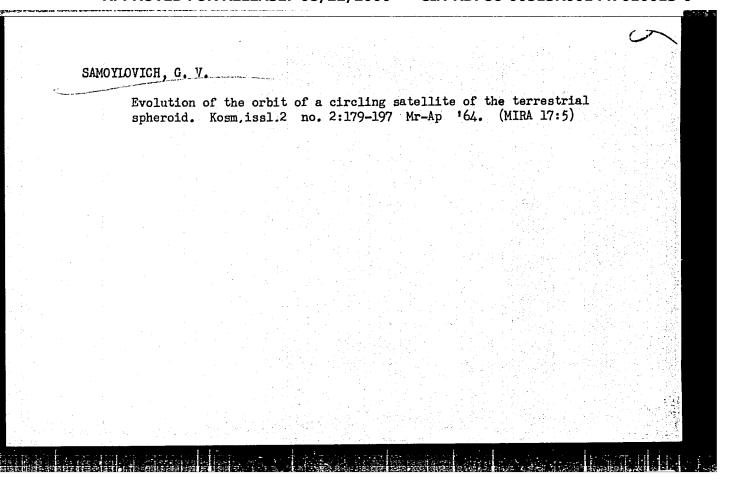   G.S., kand. tekhn. nauk, dots., red.

    [Vibrations in turbomachines] Kolebaniia v turbomashinakh.
    Moskva, Mosk. energ. in-t, 1961. 213 p.   (MIRA 16:6)
        (Turbomachines--Vibration)

SAMOYLOVICH, G.S. (Moscow)

"Theory of non-steady flow past the aerodynamical cascade"

Report presented at the 2nd All-Union Congress on Theoretical and Applied
Mechanics, Moscow 29 Jan - 5 Feb 64.

SAMOYLOVICH, G. V.

Evolution of the orbit of a circling satellite of the terrestrial
spheroid. Kosm. issl.2 no. 2:179-197 Mr-Ap '64. (MIRA 17:5)

$/^{oo}2/o177/o197$

S/0293/64/002/0296/0303

ACCESSION NR: AP4034791

AUTHOR: Samoylovich, G. V.

TITLE: Evolution of the circular orbit of a satellite of the terrestrial spheroid

SOURCE: Kosmicheskiye issledovaniya, v. 2, no. 2, 1964, 296-303 $0179-0197$

TOPIC TAGS: artificial satellite, artificial satellite circular orbit, artificial
satellite orbit, artificial satellite orbital element

ABSTRACT: Circular orbits are desirable for certain types of artificial satel-
lites, but such an orbit usually cannot be achieved in a noncentral gravitational
field and the character of a circular satellite orbit has been insufficiently
studied. In this paper, the author analyzes solutions of equations in osculating
elements, determined by means of the small parameter ( ) method to find analytical
relationships describing the perturbed motion of an artificial satellite under the
influence of the second zonal spherical harmonic of the earth's gravitational po-
tential. The derived equations are used for a qualitative investigation of the
form and position of circular and almost circular osculating satellite orbits.
The solutions can be of interest in computing the trajectories of perturbed motion
of an artificial satellite. The paper consists of the following sections:

1/2

ACCESSION NR: AP4034791

1 - Solution of equations in osculating elements by the small parameter method;
2 - Characteristic orbital inclinations of satellite circular orbits; 3 - Prop-
erties of osculating orbits; 4 - Extremal satellite positions; 5 - Change in
initial conditions. Influence of quasi-secular part; 6 - Osculating nearly circu-
lar satellite orbit. "The author wishes to thank M. D. Kislik, D. Ye. Okhotsim-
skiy and N. N. Moiseyev for discussions of the results and V. D. Slesareva, who
made many of the computations. He also expresses thanks to A. A. Orlov and I. V.
Babushkina who read the manuscript and made valuable comments." Orig. art. has:
30 formulas, 12 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 25Mar63   DATE ACQ: 20May64   ENCL: 00

SUB CODE: AA, SV   NO REF SOV: 007   OTHER: 002

2/2

ACCESSION NR: AT3006842   S/2560/63/000/016/0136/0139

AUTHOR: Samoylovich, G. V.

TITLE: A system of parameters for the description of orbits of cosmic vehicles

SOURCE: AN SSSR. Iskusst. sputniki Zemli, no. 16, 1963, 136-139

TOPIC TAGS: satellite, earth satellite, artificial satellite, orbit, satellite orbit, Laplace vector, ascending node, orbit inclination, gravitational constant, evolution of orbit, orbit evolution, osculating element, circular satellite, instantaneous circular satellite

ABSTRACT: This theoretical paper issues from the premise that the osculating elements provide a convenient system of parameters for the description of the evolution of a satellite (S) orbit (O) under the action of perturbing forces. It is noted, however, that since the components of the Laplace vector, f_1 and f_2 (in the inertial geocentric Cartesian system of coordinates), are of the same order of smallness relative to the eccentricity e (when e goes to 0), the expression for the angular distance of the perigee at the point $e=0$ becomes an indeterminate quantity of the type 0/0, whereas in the system of differential equations in the osculating elements a singularity appears that renders the investigation of circular and near-

Card   1/3

ACCESSION NR: AT3006842

circular orbits difficult. A geometric expression of this fact consists in the "diffusion" of the perigee over every point of the circle. Inasmuch as the components f_1 and f_2 tend toward zero simultaneously (for e going to 0) and circular orbits are described by 3 and not 5 parameters, the inclusion of the constants f_1 and f_2, in lieu of e and ω, yields universal parameters that describe orbits with any e. For greater convenience the components f_1 and f_2 are replaced by $q = e \cos \omega$ and $k = e \sin \omega$, where

$$\frac{f_1}{\mu} = q \cos \Omega - k \sin \Omega \cos i,$$

$$\frac{f_2}{\mu} = q \sin \Omega + k \cos \Omega \cos i,$$

and where Ω is the longitude of the ascending node of the orbit, i is the inclination of the orbit, and μ is the gravitational constant. An expression is derived to express q and k as functions of the radial and transversal velocity components and the latitude argument of the S. An expression for the Laplace vector is arrived at in terms of the velocity of the "instantaneous circular S," V_0, namely,

$$f = R^2 \left(\frac{V^2}{V_0^2} A - A_0 \right) \quad (4)$$

where the term "instantaneous circular S" designates the S that would be moving along a circular orbit with a radius equal to that of the instantaneous value of the running

Card 2/3

ACCESSION NR: AT3006842

radius-vector of the given S. From eq. (4) an equation for the eccentricity is
derived:

$$e^2 = 1 - 2\frac{V^2}{V_0^2}\frac{A}{A_0}\cos\alpha + \frac{V^4}{V_0^4}\frac{A^2}{A_0^2}.$$

For the perigee we obtain

$$e = \frac{V^2}{V_0^2}\frac{A}{A_0} - 1$$

"In conclusion I thank D. Ye. Okhotsimskiy for his useful discussion of the problem
set forth here." Orig. art. has 1 figure and 4 numbered equations.

ASSOCIATION: none

SUBMITTED: 25Apr62   DATE ACQ: 08Aug63   ENCL: 00

SUB CODE: AS, AP   NO REF SOV: 001   OTHER: 000

Card   3/3

SAMOYLOVICH, G.V.

Motion of an artificial satellite of the nonspherical earth.
Isk. sput. Zem. no.16:140-153 '63.   (MIRA 16:6)

(Artificial satellites—Orbits)

ACCESSION NR: AT3006844   S/2560/63/000/016/0154/0162

AUTHOR: Samoylovich, G. V.

TITLE: Effect of orbit parameters on the perturbed motion of an artificial Earth satellite

SOURCE: AN SSSR. Iskusst. sputniki Zemli, no. 16, 1963, 154-162

TOPIC TAGS: satellite, Earth satellite, artificial Earth satellite, artificial satellite, motion of satellite, satellite motion, perturbed satellite motion, perturbed motion, perturbation, orbit parameter, spheroid, gravitational anomaly, anomaly, triaxial ellipsoid, flattening, compression, square of flattening, square of compression, triaxiality, asymmetry, total anomaly, global anomaly

ABSTRACTS: Issuing from an analysis of the results of a numerical integration of the equations in terms of the osculating elements written by the author in his paper appearing on p.140 of the present booklet, this theoretical paper determines the effect of the initial orbit parameters on the perturbations of the motion of an artificial Earth satellite (S). The periodic and quasi-secular perturbations are examined over an interval of 10 orbits of the satellite, just as in the antecedent paper. The

Card 1/3

ACCESSION NR: AT3006844

latitude argument u serves as the argument of the motion. All designations, the
form of the gravitational potential, and the constants in the present paper are the
same as in the other paper. Section 1. Effect of orbit parameters on the perturba-
tion of the motion of a S in the field of a spheroid. The effect of the orbit inclination,
the magnitude of the focal parameter, the eccentricity, and the position of the peri-
gee are analyzed, and the respective relationships are plotted and tabulated.
Section 2. Effect of orbit parameters on perturbations due to gravitational anomal-
ies. The effect of the orbit inclination, the eccentricity, and that of the angular dis-
tance of the perigee on the modularly maximal periodic perturbations are tabulated.
The gravitational anomaly perturbations are those of the second power of the flat-
tening, triaxiality, asymmetry, and the sum of the anomalies. Section 3. Effect of
orbit parameters on the perturbations of the motion of a S in the field of a triaxial
ellipsoid. The dependence of the periodic perturbations (PP) of the orbit parameter
p and the function δr on the longitude of the ascending node, the dependence of the
PP's of the eccentricity e and the function t and the perigee distance ω on the
longitude of the ascending node are expressed and graphically shown. It is found
that the variation of the eccentricity affects the orbit-element perturbations in the
same manner as in the motion in the field of a spheroid. Orig. art. has 7 figures
and 10 tables.

Card 2/3

SAMOYLOVICH, I. A.

135-8-10/19

SUBJECT: USSR/Welding

AUTHOR: Samoylovich, I.A., Engineer.

TITLE: Spot-Welding of Duralumin "Д16Т" of 1-1.5 mm Thickness on
              "МТИП-300-1" Welding Machine (Reshimy tochechnoy svarki duraly-
              umina "Д16Т" tolshchinoy 1-1.5 mm na mashine "МТИП 300-1").

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, #8, p 27-29 (USSR)

ABSTRACT: The author's plant faced the necessity to start welding duralu-
              min on a welder "МТИП-300-1" (see the article by L.V. Zaychik
              and A.M. Kanin, "Svarochnoye Proizvodstvo" #8, 1956). The
              design of the pneumatic reversing device which changes the
              current polarity in the primary transformer winding had to be
              changed since it frequently caused short circuits due to dis-
              placement of slide bars and jamming of sliding brackets. The
              improved design of the device, with ball bearings on studs
              rolling on steel bars, is shown by a photograph.

              Experimental welding of specimens - including etching prior
              to welding - is described in minute detail.

              Etching in alcaline solutions (instead of degreasing) with sub-
              sequent covering with a phosphate film resulted in very good

Card 1/2

SAMOYLOVICH, I.A., inzh.; TSEKHMISTER, I.M., inzh.

Determining the optimum consumption of argon in argon-arc welding of AMg6 alloy weld joints. Svar. proizv. no.7:17-20 Jl '63.
(MIRA 17:2)

USSR/Cultivated Plants - Grains.   M

Abs Jour   : Ref Zhur Biol., No 18, 1958, 82306

Author   : Samoylovich, I.F.

Inst   : Molotovsk Agriculture Institute

Title   : Experimentation in Growing Corn for Seeds Under the
               Conditions of Molotovskaya Oblast'.

Orig Pub   : Tr. Molotovsk. s.-kh. in-t, 1957, 15, 31-45

Abstract   : Under the conditions of Molotovskaya oblast' the medium
               early varieties of corn - Bezenchukskaya 41, Bezenchuk-
               skiy hybrid, Spasovkaya and Samyy ranniy - can produce
               cobs of milk-wax maturity. It is expedient to organize
               the selection and seed growing work with this group of
               varieties by means of repeated replantings with free re-
               pollination. Along with this, the seed plots for corn
               should be selected on warm southern slopes with good

Card 1/2

- 32 -

SAMOYLOVICH, I.M.

Mechanisms of the action of serotonin and the antidiuretic hormone on diuresis. Fiziol. zhur. 50 no.2:217-219 F '64.

(MIRA 18:2)

1. Kafedra farmakologii Pediatricheskogo i Sanitarno-gigiyenicheskogo fakul'tetov Meditsinskogo instituta, Donetsk.

L 2161-66

ACCESSION NR: AP5023676

UR/0219/65/060/009/0067/0070

615.887-017 : 611.841.2-018.866

AUTHOR: Samoylovich, I. M.

TITLE: Pharmacological analysis of serotonin-sensitive structures in the afferent nerve endings of the cornea

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 60, no. 9, 1965, 67-70

TOPIC TAGS: serotonin, nerve stimulation, pharmacodynamics, cornea, anesthesia

ABSTRACT: Instillation of cocaine solutions into the conjunctival sac of rats produced terminal anesthesia, the depth of which tended to increase with the concentration. Instillation of a serotonin solution into the conjunctival sac two minutes before cocaine administration reduced its anesthetic activity. Histamine, like serotonin, was also a non-concurrent cocaine antagonist. Since the antagonistic effect of serotonin, but not that of histamine, was concurrently blocked by morphine (according to the literature, a specific antagonist of serotonin in its action on

Card 1/2

L 2161-66
ACCESSION NR: AP5023676

the nerve endings), the author regards the serotonin-sensitive structures of the afferent nerves of the cornea as M-receptors. He investigated the degree of terminal anesthesia induced by such known antagonists of serotonin and histamine as diprazine, dimedrol, dihydroergotamine, and 1-benzyl-2,5-dimethylserotonin. Except for dimedrol, all the drugs had greater anesthetic activity than did cocaine. This suggests that besides their direct effect on the excitable membrane of the corneal receptor, the above substances decrease its sensitivity to mechanical stimulation indirectly through its serotonin- and histamine-reactive structures. Orig. art. has: 3 figures, 1 table.

ASSOCIATION: Kafedra farmakologii, pediatricheskogo i sanitarno-gigiyenicheskogo fakul'tetov, Donetskogo meditsinskogo instituta (Department of Pharmacology of the Pediatrics and Sanitation-Hygiene Faculties, Donetsk Medical Institute)

SUBMITTED: 23Apr64   ENCL: 00   SUB CODE: LS

NO REF SOV: 003   OTHER: 011

Card 2/2

LISTROV, O.F., gornyy inzh.; SAMOYLOVICH, I.S., gornyy inzh.

Lighting of mine workings at the 20th Party Congress Mine. Sveto-
tekhnika 6 no.7:9-11 Jl '60. (MIRA 13:7)
(Krivoy Rog--Iron mines and mining--Lighting)

LISTROV, O.F., starshiy nauchnyy storudnik; SAMOYLOVICH, I.S.

Improve the lighting of underground mines. Bezop. truda v prom.
5 no. 2:11-12 F '61. (MIRA 14:2)

1. Krivorozhskiy nauchno-issledovatel'skiy institut ornorudnoy
promyshlennosti (for Listrov). 2. Nachal'nik elektromekhaniche-
skogo otdela rudoupravleniya im. XX parts"yezda (for Samoylovich).
(Mine lighting)

SAMOYLOVICH, I.S., inzh.

Certain problems concerning the improvement in the lighting of
ore mines. Svetotekhnika 7 no.7:15-18 Jl '61.   (MIRA 14:8)

1. Rudoupravleniye imeni XX parts"yezda tresta "Leninruda."
            (Mines and mineral resources—Lighting)

SAMOYLOVICH, I.S., gornyy inzh.-elektromekhanik

        Floodlighting for scraper roads. Gor. zhur. no.6:53-54
        Je '62.   (MIRA 15:11)

      1. Rudcupravleniye im. XX parts"yezda, Krivoy Rog.
              (Krivoy Rog Basin--Mine lighting)

SAMOYLOVICH, I.S., inzh.

       Intervals between the whitewashing of underground mines.
       Svetotekhmika 8 no.10:28-30 0 '62.   (MIRA 15:9)

    1. Rudoupravleniye imeni XX partiynogo s"yezda, g. Krivoy Rog.
           (Electricity in mining)

SAMOYLOVICH, I.S., gornyy inzh.

Increasing the effectiveness of mine lighting with reflecting
lamps. Gor. zhur. no.9:66-68 S '64.   (MIRA 17:12)

1. Rudoupravleniye im XX part"yezda, Krivoy Rog.

SAMOYLOVICH, I.S., gornyy inzh.

> Review of the book by A. Roberts "Mine lighting." Gor.
> zhur. no.9:78-79 S '64.   (MIRA 17:12)

1. Rudoupravleniye im. XX parts"yezda, Krivoy Rog.

SAMOYLOVICH, Konstantin Danilovich; KARKLINA, E.I., red.; YERMILOV, V.M.,
tekhn. red.

[Swine breeding section of the "1-e maia" Collective Farm] Ple-
mennaia svinovodcheskaia ferma kolkhoza "1-Maia." Minsk, Izd-vo
Akad.sel'khoz.nauk BSSR, 1960. 33 p.   (MIRA 14:12)
          (Slutsk District—Swine breeding)

SAMOYLOVICH,M.A., inzhener

Automatic control in contact sulfuric acid plants in Germany. Khim. prom. no.4:118-121 Ap'47.   (MIRA 8:12)
        (Germany, West--Sulfuric acid industry) (Automatic control)